

WIDE INPUT VOLTAGE RANGE LIGHT EMITTING DIODE DRIVER

ABSTRACT

A current-regulating driver circuit for a light emitting diode (LED) maintains energization drive to and thereby illumination provided by the LED at a prescribed, substantially constant value, over a relatively wide range of input (AC or DC) voltage. First and second input nodes are coupled to a source of AC or DC voltage and to a load, powered by the source of AC or DC voltage. An input rectifying diode is coupled to the first input node. A controlled current flow element is coupled in a first current flow path between the input rectifying diode and the LED and is controllably operative to supply current for illuminating the LED. A controlled current regulation circuit that includes a sense resistor coupled in series with the LED is coupled with the controlled current flow element between the first and second nodes, and is operative to regulate current supplied over the first current flow path by the controlled current flow element to the LED, and thereby accommodate variations in the value of the source of AC or DC voltage.